

MINERALS PROGRAM  
FILE COPY

February 28, 1989

TO: Holland Shepherd, Soils Specialist  
FROM: Scott Johnson, Reclamation Engineer *Scott*  
RE: Topsoil Deficiency at the Drum Mine Site, Western States Minerals Corporation, M/027/007, Millard County, Utah

On November 28, 1983, final approval was issued to Western States Minerals for an 88 acre gold mining operation -- the Drum Mine in Millard and Juab Counties. In 1985, the site of the operation was increased to 144 acres. The Division currently holds a surety bond for \$264,080.

The operator initially committed to salvaging 30,000 cubic yards of topsoil during mining operations. Unfortunately, only 10,000 cubic yards were salvaged.

To allow Jumbo Mining Company to acquire the property, the topsoil deficiency must be resolved. Attached is a breakdown of projected costs for amending the material -- due to the lack of topsoil -- with native hay mulch and fertilizer.

jb  
Attachment  
cc: Lowell Braxton  
Wayne Hedberg  
MN17/33

**Reclamation Estimate for Topsoil Deficiency  
at the Western States Minerals Drum Mine**

**Prepared By  
Utah State Division of Oil, Gas and Mining  
February 29, 1989**

Area	Quantity	Unit	\$/Unit	Total Cost (\$)
Drum Mine Pit	21	Acres	229	4,800
Heap Leach Pads *	31	Acres	229	7,100
Waste Dumps	26	Acres	229	6,000
Facilities	40	Acres	229	9,200
Total				27,100
Add Contingency (10%)				2,700
<b>TOTAL RECLAMATION COST</b>				<b>29,800</b>

Revegetation Cost per Acre (No topsoil)	Quantity	Unit	\$/Unit	Total Cost (\$)
<b>Bare Costs</b>				
Fertilizer (18-46-0)	100	Pounds	0.25	25
Native Hay Mulch	2	Tons	50	100
Subtotal				125
<b>Application Costs</b>				
Native Hay Mulch (spread by hand)	3.0	Hours	24	72
Native Hay Mulch (disc into ground)	0.3	Hours	67	20
Fertilizer (broadcast by hand)	0.5	Hours	24	12
Subtotal				104
<b>Total Revegetation Cost per Acre</b>				<b>229</b>

\* Note: There are 43 acres of heap leach pads. 12 of these acres will be covered with available topsoil -- 10,000 cubic yards salvaged -- at a depth of 6 inches.